

Claims

1. A method of enlarging micropores having a size less than a predetermined size in a microporous carbon material comprising the steps of;
5 selecting a liquid reagent acting as an oxidant at elevated temperature for which the molecules thereof are absorbed in the micropores to be enlarged; impregnating the carbon material with said liquid reagent; and
 thereafter heating the carbon material to a temperature exceeding the oxidizing temperature for said reagent.
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2. The method according to claim 1, wherein the porous carbon material has a bulk density of at least 0.6 g/cm^3 , a microporosity of at least $0.45 \text{ cm}^3/\text{g}$ as measured by benzene absorption and with a pore size distribution in which at least 20%, preferably at least 30%, more preferably at least 40% of the
15 micropores are of a size less than 1 nm, and a specific surface larger than $800 \text{ m}^2/\text{g}$, preferably larger than $1000 \text{ m}^2/\text{g}$; the reagent being water.
3. The method according to claim 2, wherein the microporous carbon material is a carbon powder material having micropores produced by
20 halogenation of a metal or metalloid carbide.
4. The method according to claim 1, 2 or 3, wherein the impregnating of the porous carbon material is made by saturating the material at the boiling temperature of the liquid phase of the reagent and heating the impregnated
25 carbon material at $800\text{-}1200^\circ\text{C}$, preferably at 900°C , in inert gas atmosphere.
5. A microporous carbon material having a bulk density of at least 0.6 g/cm^3 , a specific surface area of $1000\text{-}2200 \text{ m}^2/\text{g}$ and a relative specific surface

area by pore size showing a maximum peak within the pore size range 0.75-2.1 nm according to the Density Functional Theory, at least 85% of the total surface area resulting from pores with a size less than two times of the average ? peak pore size and less than 10% of the total surface area
5 resulting from pores with a size less than 0.65 nm.

6. The microporous carbon material according to Claim 5, wherein less than 1% of the total surface area results from pores with a size less than 0.6 nm.